

REMARKS

This is an application for reissue of U.S. Patent No. 6,271,278, which issued on August 7, 2001. Reexamination and reconsideration are respectfully requested.

Claims 1-40 were rejected under 35 USC 251 as being based upon a defective oath. Accordingly, a replacement reissue oath is forwarded herewith. The replacement oath adopts the language proposed in the Action.

Claims 1-40 were rejected under 35 USC 102(b) as being anticipated by DE 195 40 95 (corresponding to U.S. Pat. No. 6,136,873, issued to Hahnle et al.). Any basis for this rejection is respectfully traversed.

Hahnle et al. is cited in the Action under 35 USC 102(b), which states in pertinent part that the claimed invention must be "patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States." The instant application was filed on May 13, 1997. However, the German publication date for the cited publication is May 7, 1997, and the PCT publication date is May 15, 1997 (18 months after the German application date of November 3, 1995). Therefore, inasmuch as the cited reference was not published within the requisite time period set forth in

35 USC 102(b), it is respectfully submitted that claims 1-40 are not properly rejected under this section.

Substantively, the cited reference discloses materially different hydrogels than those of the instant application. In particular, the "superabsorbent foams" of the cited reference are described variously as having a core/shell structure (col. 5, line 48) and as being "at least partially open-celled" but as being "relatively hard and brittle" (col. 12, lines 37-43). Moreover, the cited reference discloses a two-stage process for producing the foam - a first stage that entails foaming a polymerizable mixture (col. 10, line 1, et seq.), followed by a second stage that entails polymerizing the foam (col. 11, line 38, et seq.).

In contrast, superporous hydrogels of the present invention are prepared by concurrently foaming and polymerizing an aqueous monomer mixture. This is achieved by matching the foaming and polymerization kinetics of the reaction, e.g., by employing an inorganic foaming agent reactive with acid and controlling the pH of the monomer mixture during polymerization. Materially different hydrogels are thereby formed, which are not taught or suggested by the cited reference.

Claims 1-40 were rejected under 35 USC 102(b) as being anticipated by U.S. Pat. No. 5,506,035 (Phan et al.). Any basis for this rejection is respectfully traversed. Notably, the cited

reference is a division of U.S. Pat. No. 5,338,766, and is duplicative of that disclosure. Patent '766 was cited during the prosecution of U.S. Pat. No. 6,271,278 - for which reissue is sought by the present application.

Phan et al. disclose polymer foams prepared, like Hahnle et al., by a two-stage process. First, water-soluble monomers and crosslinking agents are expanded in the presence of a substantially water-insoluble blowing agent. Then, the resulting expanded structure is subjected to conditions effective to polymerize the monomer and crosslinking agent while maintaining the expanded structure. See, e.g., col. 3, lines 11-31. Presumably, the resulting product has a core/shell-type structure similar to that of Hahnle et al. Suitable water-insoluble blowing agents and their use are discussed at col. 11, lines 7-37 and col. 51, where it is evident that hydrocarbon gases, such as Freon, are contemplated. Phan et al. also propose the use of an optional "viscosity control agent" to control the "particle size" of the blowing agent. Exemplary viscosity control agents include water-soluble compounds, such as carboxymethyl cellulose, hydroxyethyl cellulose, and polyacrylic acid. See, e.g., col. 10, lines 53-57.

The claimed invention stands in distinct contrast from the materials of Phan et al. For example, when the disintegrant particles of the present invention comprise Ac-Di-Sol®, which is

a crosslinked sodium carboxymethylcellulose product, this pre-formed network of water-insoluble cellulose fibers is dispersed into an aqueous monomer solution and suspended therein. The average particle size of such disintegrant particles is 20-50 $\mu$ m when suspended in the solution and in the final hydrogel composite. Moreover, due to swelling of the Ac-Di-Sol fiber network in the monomer solution, a network of crosslinked polymers, e.g., poly(meth)acrylate, is generated within and through the Ac-Di-Sol fiber network during the polymerization process. See, e.g., col. 24, lines 5-34. Hence, the claimed hydrogel composite comprises an "interpenetrating" network of a chemically crosslinked polymer and previously crosslinked disintegrant particles. As described at col. 24, lines 29-34, it is believed that the relatively rigid disintegrant particles of the present invention prevent excessive shrinking of the hydrogel composite upon drying, thereby increasing its porosity and capillarity.

Notably, none of the instant classes of disintegrant particles, comprising crosslinked polymers and non-crosslinked polymers having a particulate shape, encompass the water-soluble viscosity control agents disclosed by the cited reference. Therefore, Phan et al. clearly do not teach or suggest a hydrogel composite comprising the recited interpenetrating network of crosslinked polymer and particles of a disintegrant.

Claims 1-6, 8-16, and 18-40 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No. 5,750,585. However, any basis for this rejection is respectfully traversed.

The Action correctly notes that the claims of Patent '585 do not recite a disintegrant. Instead, the disclosure of Patent '585 is cited as disclosing "fillers," which, in turn, are regarded in the Action as falling within type (v) disintegrants of the claimed invention. However, the disclosure of Patent '585 "may not be used as prior art." (MPEP 804) Although the specification may be used "as a dictionary to learn the meaning of a term in the patent claim," that is not the case here, because the term "filler," or the like, simply does not appear in the claims of Patent '585.

It should also be noted that the instant application is a continuation-in-part of the application that issued as Patent '585. This is evident from the Preliminary Amendment dated March 22, 2004 in the application. The Action does not indicate that the amendment to the specification therein, making the corresponding claim of priority, has been refused entry. Therefore, the term of any patent issuing on the instant application should be automatically set to expire 20 years from the filing date of the parent application, which is actually

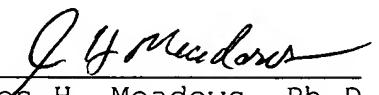
sooner than the expected expiration date of Patent '585.

Accordingly, any need for a terminal disclaimer would appear to be obviated on this basis as well.

Claims 1-40 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15, 17, 18 and 20-30 of co-pending Application No. 10/420,323. Application '323 has since issued as U.S. Patent No. 6,960,617. However, it would appear that any basis for this rejection, as well as the issue of a terminal disclaimer, are obviated in view of the fact that the term set for Patent '617 exceeds any term to which the instant application may be entitled.

If, in the opinion of the Examiner, a telephone conversation could expedite prosecution, the Examiner is invited to telephone the undersigned attorney at the number given below.

Respectfully submitted,

  
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**CERTIFICATE OF MAILING**

I, James H. Meadows, hereby certify that this paper is being deposited with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date November 28, 2005 Signature: 